

PUBLIC SERVICE COMMISSION OF WISCONSIN

INFORMATION REQUIREMENTS FOR TYPICAL MUNICIPAL ELECTRIC UTILITY CONSTRUCTION APPLICATIONS

A complete application must, at a minimum, contain the following information. Use this document as an outline and format your application using the same numbering convention found below. If an item does not apply to your project list that item in your application and mark it as NA (Not Applicable).

PSC procedures for proposed projects are defined in Wis. Admin. Code ch. PSC 4 (see Appendix A). Chapter PSC 4 classifies proposed projects as either Type I, Type II, or Type III. Before preparing an application, applicants should determine under which Type classification a proposed project falls. If you are unsure where your project falls in the PSC Type classification system, you should contact Commission staff before proceeding.

Municipal utility construction projects are generally small when compared to construction projects proposed by major electric utilities. These smaller projects are most often classified as Type III projects, however, more complex Type II projects are sometimes proposed.

Type II projects are projects involving requests for Commission approval that have the potential to significantly affect the quality of the human environment and require the preparation of an environmental assessment (EA). They include, in part, constructing new generation at an existing power plant site and constructing a new or rebuilding an existing high-voltage (100 kV – 345 kV) transmission line (For a list of the kind of utility projects that fall under Type II classification refer to Table 2 in Wis. Admin. Code ch. PSC 4).

Type III projects are proposed actions involving requests for Commission approval that normally do not have the potential to significantly affect the quality of the human environment. However, it is important to remember that state law (Wis. Stat. § 1.11 -Wisconsin Environmental Policy Act or WEPA), requires that any Commission action must consider environmental impacts. Therefore, all Type III construction applications require that Commission staff conduct an environmental screening and/or review (For a list of the kind of utility projects that fall under Type III classification refer to Table 3 in Wis. Admin. Code ch. PSC 4).

Even though Type III projects are small; they still require a complete engineering and cost analysis. In addition, these projects must be reviewed for environmental impact. For many projects, they will require a relatively short period of time for environmental review. For example, if the case involves only the replacement of a transformer completely inside an existing substation fence, the environmental

review is very short and the applicant needs to supply only a small amount of environmental information. However, when a project involves new facilities in new locations or requires an expansion of an existing facility such as a substation or a building, then a more detailed environmental review is always conducted.

Applications should include enough detail for Commission environmental and engineering staff to thoroughly evaluate a proposed project. Make sure the project is clearly and thoroughly described.

Listed below is the information required for various kinds of projects.

These filing requirements are generic in nature. Because of the wide variety of projects filed at the Commission this document is meant to serve as a starting point for applicants. Applicants are encouraged to contact Commission staff during their preparation of an application to ensure that all the information needed for a Commission decision is included in the filing. Such consultation can significantly reduce the time required to process an application.

1.00 New or Expanded Substations

If the project includes the construction of a new substation or modifications that change the boundaries of an existing substation, provide the following information:

1.01 Engineering and Need

- a. List and explain the electrical problems and issues driving the need for the project, including present and anticipated load growth.
- b. Provide a list of alternative electric solutions that have been reviewed. Describe how and why the proposed project is the best solution.
- c. Describe the equipment and facilities being proposed.
- d. Provide cost estimates for the project.

1.02 Physical Layout and Environment

- a. Provide a scaled drawing or diagram showing the location, dimensions, and layout of the new substation or proposed additions to an existing substation.
- b. Identify ownership of the land used for new or expanded substations. If land must be purchased, identify the owner and explain how and when the land will be acquired.

- c. Indicate the size (in acres) of the land purchase required, if any.
- d. Provide details on any proposed landscaping.
- e. Provide a map clearly showing the location of the substation within the community. Show landscape within at least ½ mile of the substation. Provide plat and topographic maps showing the location of the substation.
- f. Identify the township, range, section and ¼ ¼ section where any construction will occur.
- g. Show the location of all power lines entering and leaving the substation. Show details on any turning structures that might impact adjacent landowners (size, type of structure, guying, etc.). Distinguish between distribution and transmission line circuits.
- h. Provide details on any access roads required (location, width, length, gravel or paved).
- i. Describe, in detail, construction procedures including erosion control techniques. This includes details on the disposal of excavated soils and the location of equipment lay-down areas.
- j. Provide general environmental information including zoning and current or future land use. Determine how many acres of wetlands, forest, and agricultural land would be affected. Are endangered and threatened resources and historic or archeological resources found in or near the project area? (Contact Commission staff for assistance regarding endangered and threatened species or historic or archeological resources.)
- k. List all permits required from other state and federal agencies. Describe the status of each permit and provide the name of the agency contact.
- l. Provide copies of all written correspondence to and from permitting agencies.

2.00 Projects Requiring only Modifications Completely within an Existing Substation

2.01 Engineering and Need

- a. List and explain the electrical problems and issues driving the need for the substation modifications.
- b. Provide a list of alternative electric solutions that have been reviewed. Describe how and why the proposed project is the best solution.
- c. Describe the equipment and facilities being proposed.
- d. Provide cost estimates for the project.

2.02 Physical Layout and Environment

- a. Provide a scaled diagram of the existing substation.
- b. Provide a map clearly showing the location of the substation within the community (show landscape within at least ½ mile of the substation. (Topographical map or a city map with street names clearly identified)
- c. On a scaled drawing show where new equipment or facilities would be installed.
- d. Describe all construction activities.

3.00 Power line Facilities - new or upgraded (Distribution and Transmission)

Provide this information for projects where new or upgraded power lines are being proposed. This work may be in conjunction with a proposal for new generation or for new or expanded substations. Include details on both transmission and distribution constructions.

3.01 Engineering and Need

- a. Explain the electrical need for the new line or lines and identify the voltage and type of conductor being proposed.
- b. Describe all system alternatives considered.
- c. Provide cost estimates for the project.

3.02 Physical Environment

- a. Transmission lines 69 kV or Greater
 1. Provide engineering drawings of the proposed structures.
 2. Provide detailed maps clearly showing the location of line routes. Provide topographic maps (1:24,000 scale), plat maps for rural portions of routes, and city street maps for lines in urban areas. Provide information on at least two viable routes. If only one route is possible or reasonable, explain why. See Figure 1 for a sample map. Contact Commission staff to discuss alternate routes if you are uncertain of how to proceed.
 3. Identify the township, range, section and $\frac{1}{4}$ section where any ground disturbance (including compaction) may occur as a result of construction activities.
 4. Identify areas where new ROW will be needed and the width of the new ROW (This includes existing ROW that must be expanded). In addition, indicate where the proposed lines might share existing ROW with other facilities such as roads, other power lines, railroads, and pipelines.
 5. Provide recent (within last three years) aerial photos showing routes (without obscuring any information) at a scale of 1:4,800 or larger. Describe any changes to the area since the photos were taken. In a rapidly developing area, air photos may need to be taken more recently than indicated above. Consult with Commission staff regarding age of photos.
 6. Provide general environmental information including present and future land use and zoning. Determine how many acres of wetland, forest, and agricultural land would be affected (see Table 1). Are endangered and threatened species and historical or archeological resources found within or near the proposed ROW? (Contact Commission staff for assistance regarding endangered and threatened species or historic or archeological resources.)
 7. Provide flood plain maps (Flood Insurance Rate Maps (FIRM)) for the project area.
 8. Provide a mailing list of all landowners potentially affected by the proposed transmission line. This includes those whose property would be directly affected as well as adjacent land owners.

b. Distribution Circuits

1. Provide a map showing where new or upgraded distribution lines are being proposed.
2. Provide details on ROW requirements.
3. Identify corridor sharing for the proposed line/s. Show where new ROW would be needed.

3.03 EMF Information for Transmission lines (69kV or greater)

Commission staff will review and conduct a random check of your calculations in order to certify that the EMF estimates you provide are reasonable. The applicants will be required to re-file calculations that are judged incorrect.

- a. Information on EMF should include the effects of any existing or proposed distribution underbuild. Also provide the following information:
 1. For each route (or for each segment on longer lines), the number of each building type within these distance categories from centerline: 0-25 feet, 25-50 feet, 50-100 feet, 100-150 feet, and 150-300 feet.
 - Homes
 - Apartments (include number of units)
 - Schools
 - Day-care centers
 - Hospitals
 2. Identify existing electric distribution facilities and distribution lines that can be underbuilt on the transmission line. Detailed EMF profiles for each structure type under consideration. (Do not submit EMF profiles for each transmission structure.) If a transmission line design requires changes in structure type then submit one profile for each type. For example, in an application where the transmission design calls for a single-pole single-circuit structure in one location and a single-circuit H-Frame or a single-pole double-circuit structure in another location, the applicant will submit two EMF profiles: one profile for the single-pole single-circuit structure and another for the H-Frame or double-circuit design, whichever applies. This requirement applies to new construction, rebuilds, or reconducted lines. Provide the following EMF estimates (See Table 2 example):
 3. EMF estimates of new lines for anticipated normal load (normal load is defined as 80 percent of peak load - system normal), and peak load (100 percent peak load - system normal). Estimated load in amps for each load level.

4. EMF estimates in milligauss (mG) for 1 meter above the ground (resultant field only), and at 0 feet (centerline at mid-span), 25 feet, 50 feet, 100 feet, 150 feet, 200 feet, and 300 feet either side of the line (highest number only).
 5. EMF estimates for the first year of operations, and at 10 years into the future (i.e. 2002 and 2012).
- b. Assumptions used to model the EMF levels including:
1. Phase angles.
 2. Pole design diagram showing dimensions of pole arms and conductor locations. (Show conductor horizontal distance from pole and conductor distance from ground at the structure.)
 3. Height of lowest conductor(s) at mid-span.
- c. Distribution Circuits
1. Provide a map showing where new or upgraded distribution lines are being proposed.
 2. Provide details on ROW requirements.
 3. Identify corridor sharing for the proposed line/s. Show where new ROW would be needed.

4.00 Generation at existing generation sites – under 100 MW

(for generation rated at 100 MW or greater and for power plants proposed for new or undeveloped (Greenfield) sites see the CPCN filing requirements entitled “*Information Requirements for Construction of Electric Generation Facility over 100 MW*” at:

http://psc.wi.gov/electric/cons_env/reqpower.htm)

An applicant may be required to prepare a detailed noise impact study. When the number, type, and manufacturer of any proposed generator/s have been determined, applicants should consult with Commission staff to determine how best to proceed with the noise analysis portion of the application. For an idea of what is required in a noise analysis Refer to “*Measurement Protocol for Noise Assessment of Proposed and Existing Electric Power Plants*” which can be found on the PSC Website at:

http://psc.wi.gov/electric/cons_env/reqpower.htm .

4.01 Engineering and Need

- a. Explain the reason for installing new generation. Provide information on need, current and anticipated load growth.
- b. Identify who would own plant and operate the plant.
- c. Provide a construction timetable showing major construction milestones and the expected duration for each phase of construction.
- d. Estimate the number of hours of operation per year. Also provide information on the time of day when operation is most likely expected.
- e. Provide detailed information on the type and manufacturer of the generator proposed (i.e. technology and components required). Include details on any planned additions or possible expansions in the future.
- f. Identify any auxiliary facilities needed including new or remodeled buildings (see Section X for information requirements for new or expanded buildings), any steam lines and means of fuel transport and storage (e.g. gas pipeline, fuel oil tank).
- g. Provide detailed, scaled drawings of the plant layout. Show location and orientation of generators, fuel storage facilities, pipelines, and new substation facilities on the site.
- h. Identify electric transmission and natural gas interconnections needed.
- i. Provide a cost estimate for the project
- j. Provide an estimate of the power plant's life span.

4.02 Site and Environmental Information

- a. Provide a sound justification for why the selected site is the best siting solution. If the existing site must be expanded provide information on how and where.
- b. Provide a map clearly showing the location of the project site within the community. Show an area of at least one-mile radius around plant. Also include a topographical map and a city map with street names clearly identified.
- c. Identify the township, range, section and $\frac{1}{4}\frac{1}{4}$ section where any construction will occur.

If you have not already done so, at this point, contact Commission staff to discuss requirements for reporting the potential noise impact of the proposed facility.

- d. Provide a zoning map and any land use plan for the project area.
- e. Provide a recent aerial photograph of the project area. Aerial photos of the site should be at a scale of 1:4800 or larger. Photos should show one mile beyond the generation site boundaries. Describe any changes to the area since the photos were taken. On the aerial photograph, show the distances to the nearest residences.
- f. Describe in detail the construction process to be used. Explain how you will control fugitive dust, storm water, and soil erosion during construction.
- g. Estimate the frequency of fuel delivery. If the primary fuel will be natural gas, estimate the frequency of delivery for the backup fuel.
- h. Provide flood plain maps (Flood Insurance Rate Maps (FIRM)) for the project area.
- i. New power plants requiring no transmission line additions. Provide an analysis to show how the new generation source will affect the current flow on the existing transmission system. Show how the change in current flow on the transmission lines, the project is connected to, will change the EMF produced by these lines.
 - Report EMF estimates as described under EMF for Transmission.
- j. Provide a mailing list of all landowners potentially affected by the proposed project. This includes those whose property would be directly affected as well as adjacent landowners.

5.00 New or Expanded Building

If a proposed generation or substation project requires a new building or expansion of an existing building, provide the following information:

5.01 A description of any proposed new building. In the description provide the following information:

- a. The location of the facility, including township, range, section and $\frac{1}{4}$ section.
- b. A floor plan of the proposed facility.

- c. The square footage of the facility. Break this square footage out by office space, garage space, storage, and generation plant.
- d. The value of the building.

5.02 For changes to an existing building:

- a. The location of the building and description of the proposed changes to the existing facility, including:
- b. A floor plan of the proposed facility clearly showing where changes to existing structures will be made.
- c. The square footage of the facility. Break this square footage out by office space and garage space, storage, and generation plant.
- c. The value of the building, after expansion is complete

5.03 A listing of permits or approvals required by other units of government.

5.04 Environmental Issues

- a. Provide a site map or diagram showing where all construction activity will occur.
- b. Estimate direct and indirect impacts, in acres, to wetlands, forest, or grasslands.
- c. Describe construction activities required for modifications.
- d. Describe site storm water and erosion control procedures.
- e. Provide details on how the construction site will be recovered after construction is complete.

5.05 Information on energy efficiency or conservation features of the proposed facility, including:

- a. The type and R-value of insulating material used for walls, ceilings, roof, doors, and windows.
- b. The type and size of the heating and cooling system selected.
- c. The type and source of fuel or fuels selected.
- d. The type of lighting system selected.

6.00 New building or expansion (stand alone project)

If new construction is involved, information on whether the land has previously been disturbed to a depth of five feet in the past.

If the proposed project involves only a new or expanded building (no other facilities are proposed), then in addition to the information listed in Part 5.00, provide:

- 6.01 A construction schedule
- 6.02 The cost and proposed method of financing the project
- 6.03. The purpose and necessity of the project with supporting data. Supporting data can include information available regarding the growth of the utility, inadequacies of the existing facility, the need to consolidate operations, or any other information deemed important in the utility's determination that a new facility is needed.
- 6.04 A description and gross cost of alternatives the utility considered for accomplishing the purpose of the project with a statement of the reasons for rejecting these alternatives.

7.00 Buy/Sell

- 7.01 If a building, facility, or property is to be bought, sold, or otherwise transferred to new ownership, provide:
- 7.02 The location of the property to be transferred by county, township, range, section, and $\frac{1}{4}$ section
- 7.03 Topographic or plat maps from which the properties location can be determined.
- 7.03 Include whether or not there are any covenants on the property related to historic preservation.

8.00 Public Notice

The public should be notified of the project you are about to undertake. Local citizens should know what is being proposed, why, and how much it will cost. The public should also be notified that Commission approval is required before the project may proceed.

Provide:

- 8.01 Copies of all public notices.
- 8.02 Descriptions of all public meetings, hearings, and listening sessions attended where the project was discussed.
- 8.03 Information on decisions made by local units of government such as common councils, plan commissions, and zoning review boards.
- 8.04 Provide copies of all written comments from the public.

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APPENDIX A